

ABSTRACT OF THE DISCLOSURE

SCALABLE CONFIGURABLE NETWORK OF SPARSELY
INTERCONNECTED HYPER-RINGS

A network over which a medium is transferred. The network includes S core rings. Each core ring can be modeled as a set of nodes interconnected by links, where S is greater than or equal to 4 and is an integer, each said core ring having at least N nodes, where N is greater than or equal to 4 and is an integer. Each node/link is configurable in terms of directing the medium from a given source toward a given destination, and where each of the core rings is directly connected by means of k spanning links, where k is greater than or equal to 2, so as to comprise a spanning ring to at least a second and a third of the other core rings. The combinations of core rings spanned by each core ring is such that there is a path comprised of links and nodes from each node on any core ring to any other node on any other core ring. A method for transferring a medium.